

ABSTRACT OF THE DISCLOSURE

A device, method, and system for a fluid cooled channeled heat exchange device is disclosed. The fluid cooled channeled heat exchange device utilizes fluid circulated through a channel heat exchanger for high heat dissipation and transfer area per unit volume. The device comprises a highly thermally conductive material, preferably with less than 200 W/m-K. The preferred channel heat exchanger comprises two coupled flat plates and a plurality of fins coupled to the flat plates. At least one of the plates preferably to receive flow of a fluid in a heated state. The fluid preferably carries heat from a heat source (such as a CPU, for example). Specifically, at least one of the plates preferably comprises a plurality of condenser channels configured to receive, to condense, and to cool the fluid in the heated state. The fluid in a cooler state is preferably carried from the device to the heat source, thereby cooling the heat source.